MKREP BFU (#340227) RPSU (#350259)
PROJECT SUMMARY
AND
DESIGN STATUS REPORT

FOURTH QUARTER, 2004

Prepared For: The Denali Commission

Alaska Energy Authority

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1.0 INTRODUCTION

The Middle Kuskokwim Regional Energy Project (MKREP) is a bulk fuel and power facility upgrade to participating entities in seven villages in interior Alaska. The villages neighbor each other along 250 miles of the Kuskokwim River between Aniak and McGrath. The project utilizes economy of scale to facilitate the construction of necessary fuel and power improvements in each community. The MKREP involves construction of 25 new energy-related facilities in the seven participating villages, including Aniak, Chuathbaluk, Crooked Creek, Red Devil, Sleetmute, Stony River and Takotna, Alaska. The improvements include five new power plants, 47 new fuel tanks, 13,000 feet of fuel piping, an 8-mile power transmission line with a river crossing, and power distribution upgrades in three villages (see Table 1). Potential to recover waste heat will be provided by three of the new power plants to reduce heating costs to public facilities in three villages. The following summarizes the tanks and power-generating equipment proposed for each community:

Aniak. New fuel systems for the elementary and high schools, including 66,000 gallons of heating fuel and gasoline storage.

Chuathbaluk. New fuel storage and delivery to the school. New bulk fuel storage and sales system for the City of Chuathbaluk including 32,000 gallons of fuel storage. Replace MKEC power plant and provide fuel storage for power generation. The City and MKEC will share a site dedicated to this industrial use.

Crooked Creek. New fuel storage and delivery to the school. New bulk fuel storage and sales system for Thomas Trading Post including 80,000 gallons of fuel storage. Replace MKEC power plant and provide fuel storage for power generation. The new MKEC power plant will provide potential for recovered heat to the village's washeteria and clinic.

Red Devil. New fuel storage and delivery to the school. New electrical distribution system upgrade and construction of a power transmission line to Sleetmute. Power will be provided to Red Devil via the transmission line.

Sleetmute. New fuel storage and delivery to the school. New power transmission line across the river to serve all residents. New MKEC power plant to provide power to Sleetmute and Red Devil.

Stony River. New fuel storage and delivery to the school. Replace MKEC power plant and provide fuel storage for power generation.

Takotna. New fuel storage and delivery to the school. New bulk fuel storage for the Takotna Community Association. Replace TCA power plant and provide fuel storage for power generation. The new power plant will provide potential for recovered heat to the school building.

The following chart lists the fuel system and power facility upgrades associated with the MKREP by village.

Table 1 – Distribution of Facilities

	Aniak	Chuathbaluk	Crooked Cr	Red Devil	Sleetmute	Stony River	Takotna	Intertie	Total
School Tank Farm(s)	2	1	1	1	1	1	1		8
RPSU Building		1	1		1	1	1		5
RPSU Tank Farm		1	1		1	1	1		5
Village Tank Farm		1	1			1	1		4
Other				1			1	1	3
Total	2	4	4	2	3	4	5	1	25

The local participating entities in the project include: Kuspuk School District; Middle Kuskokwim Electric Coop; City of Chuathbaluk; Thomas Trading Post; and the Takotna Community Association.

2.0 WORK COMPLETED PRIOR TO OCTOBER, 2004

The concept and early design phase for MKREP began in August of 2003. Survey and geotechnical investigations were completed in fall and winter 2003. HDL submitted 65% design

drawings to AEA in January 2004. HDL and AEA project managers conducted site visits in the spring of 2004 to coordinate participants and complete the design. STG, Inc. was selected as the construction manager for this project and coordination between the designers and the CM began in June, 2004. Continued modifications associated with the design, cost estimation and scheduling continued through the summer months and into the fall.

3.0 WORK COMPLETED DURING THE FOURTH QUARTER OF 2004

Considerable progress was made with the design, material procurement, and funding of the MKREP during the last quarter of 2004. All requested funds were granted to the intended participants by the Denali Commission, and all participants have completed and signed grant agreements. The required parties have also signed business plans. The proposed energy improvements are fully funded and construction will begin in summer of 2005 as scheduled.

HDL submitted 95% design drawings to AEA on October 22, 2004. Immediately following their review, four tank procurement packages were created. HDL and STG worked to modify the tanks to include the mechanical equipment integral with the tanks. The purpose was for the tank and the pump box assembly to be delivered to the site as one unit, eliminating the extra time associated with field construction. STG constructed a prototypical pump box that was used to create design drawings that were included in the tank procurement packages.

The first three tank packages were released for bid during the first week of December. T-Bailey, Inc., and Greer Tank and Welding, Inc. submitted bids for the first of three tank packages on December, 30th, 2004. T-Bailey was the only bidder on Tank Packages #2 and #3. Because the bids were high, AEA awarded the first package to T-Bailey and reissued the second two packages in the first quarter of 2005. AEA hopes that the re-submittal will generate a more competitive bid process to reduce the cost of the tank procurement.

4.0 FUTURE WORK SCHEDULED

Material procurement will continue through January and February to ensure that the necessary materials are onsite to begin construction in June, 2005. The bid opening for the reissued tank packages #2 and #3 is scheduled for January 27, 2005. It is expected that a suitable contract will be awarded from the bids received and construction will begin on all of the tanks included in

the first three bid packages shortly there after. The fourth tank package, detailing the 1,000 gallon tanks, is scheduled for release at the end of January and a contract will be awarded in February. In addition to the tank procurement packages, the steel procurement package and electrical panel procurement package are expected to be released by the middle of February.

Tank inspections are scheduled for April, 2005. Representatives from STG and HDL will inspect the tank at the production facilities to ensure that the product is in agreement with the contract documents.

Construction-ready drawings will include modifications shown in the tank, steel, and panel bid documents, and will be issued in April or May 2005.